
**Department of Commercial Accounting**

# Cost and Financial Management 3B

**CFM33B3**

## SUPPLEMENTARY LAST ASSESSMENT OPPORTUNITY

## Date: December 2014

**Time: 180 minutes** **Marks: 100**

**Assessors**: R Boersma, M Mouton, M van Rensburg

**Moderator**: SR de Wet (Internal)

J Verster (External)

**INSTRUCTIONS:**

- This paper consists of 9 pages (including the cover page) and an appendix of 2 pages
- Answer all questions. Show all calculations and workings clearly.
- Draw a line under each question.
- Silent, non-programmable calculators may be used.
- Where applicable, round all calculations to two decimal places, unless stipulated otherwise.
- **This question paper must be submitted with your script.**

| Question | Topic | Marks | Time |
|---|---|---|---|
| 1 | Cost Volume Profit Analysis | 30 | 54 minutes |
| 2 | Short term decision making and relevant costing | 30 | 54 minutes |
| 3 | Investment Appraisal | 40 | 72 minutes |
| | | **100** | **180 minutes** |

**QUESTION 1** **(30 marks)**

This question consists of two independent parts

**Part A (23 marks)**

Roux Limited manufactures one standard product, CASAT. This product's marginal costs are as follows:

| | |
|---|---|
| Direct materials | 8.00 |
| Direct labour | 4.25 |
| Variable manufacturing overheads | 1.75 |
| | R14.00 |

The budget for 2014 contains the following information:

| | |
|---|---|
| **Production/Sales** (units) | 100 000 |
| **Fixed Overheads** | **R** |
| Production | 800 000 |
| Administration | 200 000 |
| Marketing (including advertising and other marketing costs) | 300 000 |
| ***Total Contribution*** | R1 600 000 |

The management of Roux Limited discussed the budget and is unhappy with the anticipated results.
An urgent board meeting was called and possible strategies to bring about better results were discussed.
The following suggestions were made at the meeting (view each proposal independently):

**Proposal 1:**
The financial manager suggested that the selling price be increased by 10% and that the current advertising costs of R100 000 be increased by R290 000 due to an additional campaign. He has calculated that this would increase units produced and sold to 125 000 units. It will, however, bring about an increase of R80 000 in fixed production overheads and of R170 000 in other marketing overheads.

**Proposal 2**
The marketing director was convinced that an appropriate increase in advertising expenditure would result in a 15% increase in sales units. (from the 2014 budget) and a profit of 13% on sales revenue being realised.
In this case fixed production overheads would increase by R60 000 and other fixed marketing costs would increase by R15 000.

**Proposal 3**
The managing director obtained new information and is convinced that an increase of R255 000 in advertising expenditure would lead to a 17% increase in sales units. Fixed production overheads would increase by R50 000.

**Required**

a) Calculate the following
   I. Current contribution per unit, (1)
   II. Selling price per unit and (1)
   III. Total profit of the organisation. (1)
b) Calculate the profit for Roux Ltd, should proposal 1 be implemented. (6.5)
c) Calculate the additional expenditure on advertising that will ensure that the required result of proposal 2 is achieved. Verify your answer by preparing a contribution income statement. (8.5)
d) Calculate what the selling price of one CASAT should be to ensure a profit of R618 000, assuming that the managing directors estimates (proposal 3) are correct. (5)

**<u>Part B</u> (7 marks)**

**Required**

For each of the questions a) – e) below, write down the question number with the correct answer next to each question number on the paper provided. (7)

***The following information relates to question a):***

Kabelo Limited provides the following information:

| | |
|---|---|
| Sales (200 000 units) | R500 000 |
| Manufacturing costs | |
| Variable | R170 000 |
| Fixed | R30 000 |
| Selling and administrative cost | |
| Variable | R80 000 |
| Fixed | R20 000 |

a) What is the break-even point in units for Kabelo? (2)
   a. 33 334 units
   b. 100 000 units
   c. 40 000 units
   d. 200 000 units

***The following information relates to questions b) – d):***

Lonwabo projected the following information for 2014:

| | |
|---|---|
| Selling price per unit | R150 |
| Variable cost per unit | R90 |
| Total fixed costs | R300 000 |

b) What is the break-even value? (2)
   a. R300 000
   b. R750 000
   c. R499 950
   d. R9 000 000

c) What is the profit when one more unit than the break-even point is sold? (1)
   a. R150
   b. R60
   c. R1 500 150
   d. R600 060

d) What is the contribution margin ratio? (1)
   a. 40%
   b. 166.7%
   c. 250%
   d. 60%

e) On a profit-volume graph, the profit line intersects the horizontal axis at (1)
   a. The origin
   b. The break-even point
   c. A volume of 1 000 units
   d. A point where profit is greater than zero

**QUESTION 2 (30 marks)**

This question consists of two independent parts

**Part A (20 marks)**

**SUPERSLOW** is a company that manufactures two products namely Beta and Alpha. The selling price and manufacturing details for the two products are as follows

| | Beta | Alpha |
|---|---|---|
| | R | R |
| Unit selling price | 90 | 100 |
| Less: Variable manufacturing cost | | |
| Direct labour (R7 per hour) | 28 | 14 |
| Material A (R5 per kg) | 10 | 45 |
| Material B (R10 per litre) | 10 | 20 |
| Variable overheads | 2 | 1 |
| Less: Fixed overheads absorbed | 12 | 6 |
| **Profit per unit** | 28 | 14 |

- Variable non-manufacturing costs for Beta and Alpha are estimated at R20 and R10 per unit, respectively.
- At a recent meeting of the production department, the production plans for 2014 were discussed and the following resource availability was identified:

| | |
|---|---|
| Direct labour | 3 500 hours |
| Material A | 6 000 kg |
| Material B | 1 600 litres |

- During the meeting, the production manager (Mr Knowitall) made a comment that his department has sufficient resources to achieve its target production plan of 400 units of Beta and 700 units of Alpha in 2014.

**Required**

a) Advise Mr Knowitall as to whether his department has sufficient resources to achieve its target production plan of 400 units of Beta and 700 units of Alpha. (7.5)

b) Assuming that the target production plan **will not** be achieved with the current resources, calculate the optimum product mix and calculate the contribution generated by this optimum product mix. (12.5)

**Part B (10 marks)**

| **Required** |
|---|

For each of the questions a) – f) below, write down the question number with the correct answer next to each question number on the paper provided. (10)

***The following information relates to questions a) – b)***

Fana Ltd. manufactures 20 000 components per year. The expected manufacturing cost of the components for the coming year is determined as follows:

| | |
|---|---|
| Direct materials to be purchased | R150 000 |
| Direct labour (overtime that can be increased or reduced as required) | R240 000 |
| Variable manufacturing overhead | R90 000 |
| Fixed manufacturing overhead (unavoidable over the short term) | R120 000 |
| Total manufacturing cost | R600 000 |

An outside supplier has offered to sell the components to Fana for R25.50 each.

a) What will the effect on the expected income for the year be if Fana purchases the components from the outside supplier instead of manufacturing it in-house? Assume that Fana has no alternative use for the spare capacity. (3)
   a. R30 000 increase
   b. R90 000 increase
   c. R30 000 decrease
   d. R90 000 decrease

b) What is the effect on income if Fana purchases the component from the outside supplier? Assume that Fana will rent the spare facility to JoJo Ltd. for R45 000. (3)
   a. R45 000 increase
   b. R15 000 increase
   c. R75 000 decrease
   d. R105 000 increase

c) Firms may be asked to accept a special order of their product for a reduced price if:(1)
   a. It can be concealed from the government
   b. Excess capacity exists
   c. The order is small
   d. The plant is producing at maximum capacity

d) If there is excess capacity, the minimum acceptable price for a special order must cover (1)
   a. Variable costs associated with the special order
   b. Variable and fixed manufacturing costs associated with the special order
   c. Variable and incremental fixed costs associated with the special order
   d. Variable and incremental fixed costs associated with the special order plus the contribution margin usually earned on regular units

e) When there is one scarce resource, the product that should be produced first is the product with the highest: (1)
   a. Contribution margin per unit of the scarce resource
   b. Sales price per unit of the scarce resource
   c. Demand
   d. Contribution margin per unit

f) An important qualitative factor to consider regarding a special order is the:(1)
   a. Variable costs associated with the special order
   b. Avoidable fixed costs associated with the special order
   c. Effect that the sale of special-order units will have on the sale of regularly priced units
   d. Incremental revenue from the special order

**QUESTION 3 (40 marks)**

This question consists of three independent parts

**Part A (10 marks)**

The following information was taken from the accounting records of Hollywood Inc.
(Assume a tax rate of 30%)

| Source of capital | Book value | Before tax cost |
|---|---|---|
| Long term debt | R 700 000 | 7.6 % |
| Preference shares | R 50 000 | 12.0 % |
| Shareholder's equity | R 650 000 | 16.0 % |

**Required**

a) Calculate the entity's weighted average cost of capital using book values. (7)
b) Explain why and how the entity can use this cost of capital when making investment decisions.(3)

**Part B (25 marks)**

Your company is considering investing in its own transport fleet. The life of this transport fleet would be five years, after which the vehicles would have to be disposed of. The present position is that the transport services are contracted out to an outside organisation. The life of the transport fleet would be five years, after which the vehicles would have to be disposed of.

The cost to your company of using the outside organisation for its transport services is R250 000 for this year. This cost, it is projected, will rise by 10% per annum over the life of the project.

The initial cost off the transport fleet would be R750 000 and it is estimated that the following costs would be incurred over the next five years if the own fleet is acquired:

| | Drivers Costs | Repairs and Maintenance | Other Costs |
|---|---|---|---|
| | R | R | R |
| Year 1 | 33 000 | 8 000 | 130 000 |
| Year 2 | 35 000 | 13 000 | 135 000 |
| Year 3 | 36 000 | 15 000 | 140 000 |
| Year 4 | 38 000 | 16 000 | 136 000 |
| Year 5 | 40 000 | 18 000 | 142 000 |

Other costs include depreciation. It is projected that the fleet would be sold for R150 000 at the end of year 5. It has been agreed to depreciate the fleet on a straight line basis.
Your company uses a cost of capital of 12% to evaluate capital investment projects.
As funds are limited, investments can only be made in one project.

*Note:* The transport fleet would be purchased at the beginning of the project and all other expenditure would be incurred at the end of each relevant year. Ignore taxation.

| Required |
|---|

a) Prepare a table showing the net cash savings to be made by the firm over the next five years if the company invests in its own fleet (exclude the cash flows of the initial cost and the eventual disposal of the fleet from this calculation) (7.5)

b) Calculate the following for the transport fleet project:
   i. Payback period (5)
   ii. Accounting rate of return (5.5)
   iii. Net present value (7)

**<u>Part C</u> (5 marks)**

| Required |
|---|

For each of the questions a) – e) below, write down the question number with the correct answer next to each question number on the paper provided. (5)

a) Projects that, if accepted, preclude the acceptance of competing projects are: (1)
   a. Priority projects
   b. Mutually exclusive projects
   c. Independent projects
   d. Equity project

b) The time required for a project to return its investment is the (1)
   a. Accounting rate of return
   b. Interest
   c. Net present value
   d. Payback period

c) Companies may select projects with short paybacks because (1)
   a. Projects with longer paybacks may be riskier
   b. Shorter paybacks may help reduce liquidity problems
   c. If the risk of obsolescence is high, the company may want to recover the funds rapidly
   d. All of the above are correct

d) What is a weakness of the payback method? (1)
   a. It emphasizes projects with possible liquidity problems
   b. It ignores the profitability of investments beyond the payback period
   c. It can be used in conjunction with discounted cash flow methods
   d. Both a and b above

e) Why would a company use the accounting rate of return? (1)
   a. To determine whether a new investment will not adversely affect accounting income
   b. Because it does not consider the time value of money
   c. Because it is a measure of liquidity